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# Soil and Water Conservation News

United States Department of Agriculture
Soil Conservation Service

## The Earth Team—SCS Volunteers in Action

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# Comments:

## *From the SCS Chief*

## SCS and the Earth Team—A Winning Combination

"Join the Earth Team: Volunteer for Conservation" is the message of the Soil Conservation Service's National Volunteer Program.

In 1986, SCS recruited 1,700 volunteers for its Earth Team—more than double the signup for 1985. These volunteers worked on the land and in field offices, and they carried conservation education programs to schools and civic organizations. In all, they donated 95,000 hours—worth nearly two-thirds of a million dollars.

Thousands more Earth Team volunteers are needed to help win the battle against soil erosion and other natural resource problems. With more volunteer help, SCS and conservation districts can put more conservation on the land while keeping Federal costs down.

A recent Gallup poll showed that 52 percent of Americans each volunteer 3½ hours per week for community service.

These citizens are the target of the SCS Earth Team information campaign now underway. Actor Anthony Quinn is carrying our message on national television. In the States, other celebrities are also volunteering to carry the Earth Team message on radio and television. To potential volunteers we offer a toll-free telephone number, 1-800-THE-SOIL, to find the nearest SCS office looking for their talents.

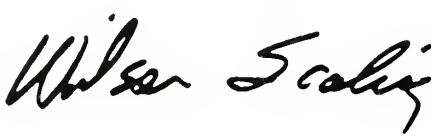
Encouraging volunteers to call is only part of the volunteer program effort. SCS employees at all levels must be ready and willing to accept and use the volunteer help that's offered to them.

Volunteer coordinators in SCS State offices are helping field office staffs determine jobs that need to be done and ways to find highly qualified volunteers to fill them. Coordinators and the volunteer program's national steering committee are working to ensure that SCS recruits, trains, and manages volunteers properly and recognizes them for their efforts. And they're making sure that signup procedures are streamlined.

There is no shortage of work for Earth Team volunteers. Carrying out the conservation provisions of the Food Security Act of 1985 alone will take many extra hands.

Take Pride In America, the new campaign to bring conservation to the Nation's public and private lands, offers many opportunities for volunteer involvement, especially for community service groups.

America has a great heritage of voluntarism on which to build the Earth Team. To make the team, a person needs only commitment to responsible stewardship of our natural resources. Together, SCS and the Earth Team will build a lasting partnership in conservation.



**Cover:** SCS Volunteer Irene Havlin waters seedlings to be given to cooperators of three central California resource conservation districts to reduce soil erosion, establish windbreaks, and create wildlife habitat. (Photo by Ron Nichols, photographer, SCS, Washington, D.C.)

Richard E. Lyng
Secretary of Agriculture

Wilson Scaling, Chief
Soil Conservation Service

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# Volunteers Give Wildlife a Second Chance

For motorists driving across Interstate 80 between Sacramento and San Francisco in Solano County, Calif., it's hard to imagine what the area looked like hundreds of years ago. Gone are the winding stretches of riparian oak woodland, grassland, and tule marshes that supported vast wildlife populations. In their place are orchards, fields of sugar beets and tomatoes, houses, and shopping malls.

In 1963, the Solano County Wildlife Plant Program was established to replace, or at least lessen the effect of, these losses in wildlife habitat. For years, the program grew trees and shrubs including eucalyptus, toyon, and quailbush and distributed them to local resource conservation district (RCD) cooperators to create wildlife habitat, establish windbreaks, and control soil erosion. The program benefited pheasant, quail, songbirds, rabbit, raccoon, opossum, fox, and other wildlife.

In 1981, the nursery for the program was moved from the California Medical Facility to the Ulatis RCD yard. Because there was no one available to build needed facilities, the program was discontinued.

In 1985, the Ulatis, Dixon, and Suisun RCD's brought the popular wildlife plant program back to life. The county board of supervisors provided funding to the RCD's to hire a program coordinator, Marie Reil, who had worked as an aide with the Soil Conservation Service and had experience working with nurseries and wildlife groups. Reil works out of the SCS office in Dixon.

Funding for the plant program comes from fines collected for fishing and hunting violations. The program will need about $3,000 to grow 10,000 plants for about 100 cooperators this year.

After 5 years of inactivity, the wildlife plant program and facilities had to practically be rebuilt. Reil worked through SCS's Earth Team Volunteer Program to recruit the help she needed.

Reil first sent a letter asking for help to those RCD cooperators who had benefited from the wildlife program in the past. She asked those who wanted to help to list their interests so that she could match them to jobs they would like and to list the days of the week they would like to work. News of the need for volunteers for the wildlife program also spread through articles in newspapers and by word-of-mouth. Initially, more than 20 people signed up to help.

One of the Earth Team volunteers, Bill Courtland, who is retired from the U.S. Department of the Navy, went to work right away on restoring the greenhouse. The first year after he retired, Courtland said that he did odd jobs and went fishing, but he became bored. The volunteer program, he said, sounded like a good way to spend his time and put a lifetime of experience to work for a good cause.

Courtland is a trained electronics technician and carpenter. He rebuilt the greenhouse and installed the automated sprinkler system. He currently puts in 10 to 12 volunteer hours a week, but hopes to spend more time on the job, getting involved with field work and providing technical assistance to cooperators.

Said Courtland, "My small community of Allendale now has more wildlife than 25 years ago because of trees put in through this program. There are three coveys of 66 quail on my property alone."

Another volunteer, Ernie Havlin, supervised transplanting of nursery stock and construction of the lathhouse. Havlin, who is also retired, had worked for the Navy and the California Employment Development Department.

Havlin lives in the English Hills in Solano County and had also participated in the wildlife habitat improvement program in the past. As little as 6 years ago, his property had no plants on it. Now, hedgerows and windbreaks are progressing well, and he said that he can see many benefits for wildlife.

"I want to reach out to people to establish windbreaks and habitat on their property," said Havlin when asked why he joined the volunteer program. "If we can accomplish on other peoples' property what I have on mine, we can help make a big difference in habitat here." In addition to helping build the lathhouse and greenhouse, Havlin will be working on plant propagation and acquiring building materials.

Marie Reil, coordinator of the Solano County Wildlife Plant Program in California, recruited the help she needed through the SCS National Volunteer Program. During a recent Saturday work session, Reil fills cans with a potting mixture to prepare for transplanting seedlings from a greenhouse.

Photo by Ron Nichols, photographer, SCS, Washington, D.C.

"The volunteers are very enthusiastic, hard working people," said Reil, "and that's what makes them so enjoyable to work with. Volunteers gather for Saturday work parties that often start at 7:00 a.m. on cold and foggy mornings. Whole families, retired people, busy farmers, and professionals all volunteer their valuable time and talents."

In 1986, 33 Earth Team volunteers worked 978 hours on the wildlife plant program. Now that the greenhouse and the first phase of the lathhouse construction are completed, the volunteers will be busy propagating plants for wildlife and other conservation purposes. They and Reil will also be working with landowners on determining wildlife habit needs and the plants most suitable to meet those needs. Recommendations are based on SCS soil information and other technical specifications.

In recognition of the success of the volunteer program in Solano County, SCS Chief Wilson Scaling presented certificates and letters of appreciation to Reil and her volunteers during his tour of California last May.

The success of the program shows in other ways as well. "Neighbors are working with neighbors," said Reil. "A real sense of community cooperation is being built."

Reil said that in organizing any volunteer effort it's important to have a specific goal to work toward, be flexible about the number of hours volunteers work, and give volunteers public recognition for their accomplishments. "Coordinating a good program," said Reil, "takes time and effort. It's the personal touch that keeps the volunteer spirit rolling. Listen to volunteers' ideas, put them in charge of a project, say 'Thank you,' and have a party once in awhile to celebrate their success."

Wildlife will never be at the level of the last century in California's Central Valley, but with the work of these volunteers, wildlife habitat and protection of soil and water resources are growing stronger every day.

**Phil Hogan,**
soil conservationist, SCS, Woodland, Calif.

## Teens Stop Erosion Before It Begins

In addition to some of the common things teenagers do, like listen to loud music and go to dances, a group of high school student volunteers in Santa Cruz County, Calif., are stopping erosion. It's part of the local observance of Erosion Control Month, which runs from September 15 to October 15.

"Each year the Santa Cruz County Resource Conservation District (RCD) sponsors Erosion Control Month," said Jim McKenna, an RCD director, "and we try to involve as many people as possible in conservation activities then."

Last year, 15 student volunteers completed three soil conservation projects. The students are members of the forestry and resource management classes that McKenna teaches at Soquel High School through a regional vocational education program.

Two of the projects involved preparing, seeding, and mulching yards of newly constructed houses. The other required building a drop inlet structure to provide a safe outlet for water leaving a pasture. All three projects were in areas subject to severe soil erosion and landslides. The Soil Conservation Service field office staff at Aptos provided technical guidance.

Anthony Williams, one of the property owners whose land was seeded, said, "I knew we had to do something to keep the soil from eroding, but I didn't realize that it had to be so extensive. The students really did a great job."

SCS District Conservationist in Aptos, Calif., Richard Casale, helped originate the idea of Erosion Control Month. "Each year the observance becomes a little bigger and a little better," he said, "and each year more people are acting to protect their property before the rainy season starts.

"If the purest form of conservation occurs when you prevent a problem, then Erosion Control Month is an exercise in pure conservation," said Casale.

**John Stuart Welsh,**
SCS Earth team volunteer, Aptos, Calif.

## Conservation Begins at Home

Paula Barnes and the Soil Conservation Service needed each other.

This past summer, the SCS field office in Okmulgee, Okla., helped Barnes and her husband with a drainage problem on their rural property. Barnes was so impressed with the technical knowledge and attitude of the SCS staff that when she later saw a newspaper article about the SCS volunteer program, she called the district conservationist and volunteered. Since then she has been working in the field office almost full time.

"I like working outside and I am learning a lot from the SCS and conservation district staffs," said Barnes. "I am learning to identify plants, use an engineering level and rod, read aerial photographs, and work with people. There is a lot of public relations work in SCS, and I like that."

Pat Bogart, the SCS district conservationist, is particularly pleased. "I didn't dream of finding someone who was willing to volunteer this much time," Bogart said. "Paula works 8 hours a day and has really been dependable. She does fieldwork and office work, takes photos, writes news articles, helps with displays and exhibits, and does about any job we have."

The fieldwork came naturally to Barnes. "Paula learns fast," said Bobby Gaines, SCS conservation technician. "I only had to show her how to use an engineering level one time and she has helped me stake and check out over 15,000 feet of terraces this summer. I don't know what we would have done without her."

Although she prefers to work outdoors, Barnes is also ready to tackle those necessary office jobs. One area that she is particularly fond of is working with children in conservation education. She assisted the SCS State staff with a conservation education booth at a State teacher's meeting in October and hopes to help develop an outdoor classroom on 40 acres on which the district recently received a free lease.

Barnes is considering a career in other fields and can work forever as a volunteer. But for now she loves the job and experience, and the SCS staff couldn't be happier to have her as a volunteer.

"We seem to have more work than our staff can get done sometimes, and Paula has really been an asset," said Bogart.

**F. Dwain Phillips,**
public affairs specialist, SCS, Stillwater, Okla.

Holding the surveying rod during checks on newly constructed terraces is one way SCS Volunteer Paula Barnes helps the SCS staff in Okmulgee, Okla., put more conservation on the ground.

## Students to Put Conservation in the News

When Ginger Cochran became an Earth Team member in the Soil Conservation Service's volunteer program, her Lakeside High School journalism students became part of the team, too. And they are learning some practical journalism skills in the process.

Through the Earth Team, Cochran is giving her students experience in doing news articles, radio programs, public service announcements, and television interviews for SCS and the Chicot County Soil and Water Conservation District (SWCD) in Lake Village, Ark.

It all started last fall when Arkansas' State Conservationist A.E. (Gene) Sullivan visited the class for a mock news conference. Sullivan told the class what SCS was doing for their area and stressed the importance of protecting the area's natural resources.

After the initial press briefing, Sullivan answered questions posed by the student journalists. By the end of the class, all of the 18 students had made a commitment to help educate the public about the need to conserve soil and water.

Cochran says there is a lot of talent in her class. "The class will receive hands-on experience while exercising their creativity and writing skills," she said. "One student is already a part-time radio announcer for an area radio station so it shouldn't be too hard getting conservation information on the air." Two other students have taken a television production course.

SCS District Conservationist Bruce Leggitt, of Chicot County, is pleased about the class project. "It will keep me busy providing information to such a fantastic group of young people," Leggitt said. "The students will be able to target a new audience with conservation information, and the audience will be young people like themselves. I am grateful for all of their help."

**Suzanne Pugh,**
public affairs specialist, SCS, Little Rock, Ark.

## Volunteering Is A Way of Life

Volunteering is a way of life for Erv Koch. Ever since he retired from the insurance business in 1982, Koch has been volunteering his time and talents to the Soil Conservation Service snow survey staff in Bozeman, Mont., as well as other organizations.

As an SCS volunteer, Koch works three afternoons a week as a hydrologic technician. He develops hydrologic computations of snowpack, streamflow, and precipitation from snow measurement notes and snow telemetry system (SNOTEL) data. SCS uses the computations with other information to forecast streamflows from melting snow, which supplies up to 75 percent of the State's spring and summer streamflow.

SCS Snow Survey Supervisor Phil Farnes said, "Erv's help has enabled us to work on conservation projects that otherwise we would have had to postpone or delay because of other priorities and lack of staff. For example, in the last year, Erv's help has enabled the snow survey staff to begin work on three additional hydrology reports and three reservoir operating plans."

Koch first learned about volunteer opportunities with SCS through Beverly Barnhart, director of the Retired Senior Volunteer Program (RSVP) in Bozeman. Besides providing SCS with volunteers through RSVP, Barnhart is also helping to coordinate the SCS Earth Team—the agency's volunteer effort—in Montana. She is conducting training sessions for SCS employees across the State. The training involves explaining why people volunteer, how to find volunteers, and how to keep them. Barnhart has also helped to coordinate cooperation between SCS and RSVP in other Montana cities.

For Koch, volunteering provides both tangible and intangible rewards. "It gives you a chance to work in an area that you've been interested in but didn't have the time or opportunity to pursue before," said Koch. "Knowing that you are needed and providing an important service gives you a sense of personal satisfaction. You meet and work with people who have many different talents and interests. All in all, volunteering gives you a broader perspective on life."

**Beatrice L. Horswill,**
volunteer coordinator, Retired Senior Volunteer Program, Bozeman, Mont.

SCS Volunteer Erv Koch, at left, and SCS Snow Survey Supervisor Phil Farnes in Bozeman, Mont., check snow survey data used to forecast streamflow from melting snow.

Photo by Brad Anseth, public affairs specialist, SCS, Bozeman, Mont.

## Conservation Compliance Club Forms

Farmers in Marshall County, Iowa, can join a newly formed club to gain a greater understanding of the conservation compliance provisions of the Food Security Act of 1985. The conservation compliance club is similar to the no-till clubs that many farmers across the Nation have joined.

In January, the Marshall County Soil Conservation District (SCD) and local farm interest groups sponsored an organizational meeting attended by 120 farmers. The meeting featured a panel of representatives from the U.S. Department of Agriculture's Extension Service, Agricultural Stabilization and Conservation Service, and Soil Conservation Service.

The club is open to everyone and will feature ways for farmers to meet the conservation provisions of the Food Security Act in the most economical way. A $5 membership fee covers mailing costs for promoting up to four meetings and tours in 1987 and the cost of refreshments.

Soil Conservation Service District Conservationist Don Baloun estimates that up to 85 percent of the 303,000 cropland acres in the county are highly erodible, and only 20 percent of those acres are adequately protected from erosion.

"The Marshall County SCD commissioners felt that there was a need for some kind of conservation club to improve communication between farmers and conservationists," said Baloun. "The club should provide a good network for reaching farmers throughout the county with the conservation information they'll need."

**Lynn Betts,**
public affairs specialist, SCS, Des Moines, Iowa

# Conservation Highlights 1986

Summary of Activities
of the Soil Conservation Service
for Fiscal Year 1986

The U.S. Department of Agriculture's (USDA) Soil Conservation Service provides technical assistance in the planning and application of conservation practices and systems to reduce excessive soil erosion on crop, range, pasture, and forest lands; to conserve water used in agriculture and improve water quality; and to reduce upstream flood damages.

The bulk of SCS assistance is provided by SCS field offices to farmers and ranchers through the Nation's nearly 3,000 soil conservation districts. A significant amount is provided in cooperation with other Federal, State, and local government agencies, as well as private organizations.

New for SCS this past fiscal year were several conservation provisions of the Food Security Act of 1985. These provisions—known as the Conservation Reserve, conservation compliance, sodbuster, and swampbuster—are designed to make USDA farm and conservation programs more consistent. SCS will be heavily involved in implementing the new conservation measures over the next few years.

Following are highlights of SCS activities during fiscal year 1986.

**Conservation Reserve Program**
The Conservation Reserve Program (CRP) is the first of the new conservation provisions of the Food Security Act of 1985 to be implemented. It is a program designed to reduce surplus commodity production and soil loss by retiring highly erodible cropland. The first signup for this new program was held in March 1986, followed by two more signups in May and August. Across the Nation, SCS provided technical assistance to the nearly 69,000 farmers who entered into CRP contracts to plant 8.8 million acres to grass, trees, or wildlife cover. SCS field office staffs also determined the eligibility of land submitted for the program.

It is estimated that establishment of permanent cover will reduce the average annual rate of erosion on land under CRP contracts by 27 tons per acre per year. CRP signups will be held through 1990 in an effort to retire 40–45 million acres of highly erodible cropland. Participating farmers receive cost-sharing assistance from USDA's Agricultural Stabilization and Conservation Service (ASCS).

**Conservation Tillage**
The use of all forms of conservation tillage continues to increase for all crops. According to the National Association of Conservation Districts' Conservation Technology Information Center, farmers used some form of conservation tillage on 97.6 million acres during 1986. This is about 33 percent of the 296 million acres planted to crops—up from about 31.5 percent the previous year. At 43 percent, the Corn Belt was the region with the greatest percentage of its cropland in conservation tillage.

Conservation tillage is any tillage and planting system in which at least 30 percent of the soil surface is covered by plant residue after planting to reduce soil erosion by water, or, where soil erosion by wind is the primary concern, at least 1,000 pounds per acre of flat small grain residue is on the surface during the critical erosion period. Farmers used no-till, a conservation tillage method in which only a narrow seedbed is disturbed for planting, on 14.4 million acres.

**Targeting**
SCS, ASCS, and other USDA agencies continued to target funds and technical assistance to areas in 44 States and Puerto Rico with the most serious soil and water resource problems. Erosion was reduced an average of 7.4 tons per acre per year on the 5.5 million acres in the targeted areas during fiscal year 1986. A total of 302,990 acre-feet of irrigation water was conserved on 822,784 acres treated in the targeted areas.

**Agricultural Conservation Program**
SCS provided technical assistance to about 100,000 farmers and ranchers who installed conservation practices under the Agricultural Conservation Program (ACP). Under long-term agreements, SCS assisted 11,000 farmers to install enduring conservation practices such as terraces and grassed waterways. Through ACP, farmers and ranchers installed water conservation practices benefiting 989,000 acres, installed terrace systems benefiting 442,000 acres, and applied conservation tillage benefiting 1.8 million acres. ACP is administered by ASCS, which provides financial assistance to the participating landowners.

**Great Plains Conservation Program**
Through the Great Plains Conservation Program (GPCP), SCS provides technical assistance and cost sharing to landowners to minimize the hazards of recurring drought and wind and water erosion in the 10 Great Plains States. This past year, 946 farmers and ranchers signed long-term GPCP contracts to apply conservation measures on 2.7 million acres. Conservation work was completed on 998 contracts covering 2.3 million acres.

**Rural Abandoned Mine Program**
SCS administers the Rural Abandoned Mine Program (RAMP) authorized by Section 406 of the Surface Mining Control and Reclamation Act. Through RAMP, the agency provides technical and financial assistance for reclaiming soil and water resources on rural lands adversely affected by coal mining. By the close of the past fiscal year, 579 contracts obligating $55.4 million had been signed. Conservation work done under these contracts has reduced soil erosion by 618,800 tons, eliminated 1,000 safety and health hazards, and improved water quality in 57,600 acres of lakes and 277 miles of streams.

**Soil Erosion Research**
With SCS cooperation and support, USDA's Agricultural Research Service (ARS) and State agricultural experiment stations completed studies confirming that moderately or severely eroded soils, especially those with limited depth to a restricting layer, produce lower crop yields than slightly eroded soils. Loss of nutrients and reduced capacity to supply water to crops are the major explanations for yield reductions, but supplying water and nutrients at optimum levels does not restore full productivity.

In other activities, SCS continued to support the efforts of ARS to develop new models for predicting wind and water erosion. SCS and ARS also continued development of a large simulation model to predict how soils and cropping practices affect erosion and crop yields.

**Soil Moisture and Temperature Monitoring**
This was the seventh year in an 8-year study in which SCS is monitoring soil moisture at eight sites across the United States. In other work, ARS finished calibrating a soil moisture model that will be useful in irrigation scheduling, dryland farming, soil classification, and crop forecasting.

**Soil Surveys**
This past fiscal year, 82 new soil surveys were published. Each survey describes the physical and chemical characteristics of the soils in the survey area—generally a county. It names and classifies the soils and provides information on the potentials and limitations of the soils for various uses. Detailed maps show where each soil is located. SCS mapped more than 42 million acres during the year, and cooperating agencies mapped an additional 3.9 million acres.

**Colorado River Salinity Control**
Work was completed in the Arizona Wellton–Mohawk salinity control project. SCS has assisted irrigators in this project to develop 366 salinity control-water management plans for treating 48,195 acres. Average onfarm irrigation efficiencies have been raised from 55 percent to 80 percent, substantially reducing saline return flows to the Colorado River. To date, the U.S. Department of the Interior's Bureau of Reclamation has provided more than $18 million for the installation of facilities in this project.

Projects in the Uinta Basin, Utah, and Grand Valley, Colo., have reduced the total annual salt load to the Colorado River by about 57,300 tons. SCS provides technical assistance on these projects, and ASCS provides cost-sharing funds. Also cooperating are the Bureau of Reclamation and USDA's Extension Service and ARS.

In 1984, Congress authorized a voluntary, onfarm salinity-control program for the Colorado River Basin. Funding of $3.8 million has been made available to begin this new program in fiscal year 1987.

**Small Watersheds**
SCS began construction on 10 new small watershed projects in 1986, approved planning for 47 projects, authorized installation of 32 projects, and completed construction on or closed out 15 projects. Small watershed projects combine conservation measures and structural and nonstructural measures to reduce flood damage and provide water for agriculture and municipal and industrial consumption.

**Emergency Assistance**
SCS funded approximately $48.7 million worth of emergency watershed protection work during the year to help repair damage caused by floods and other natural disasters in 30 States.

**Resource Conservation and Development Areas**
Work continued this past fiscal year in the 191 areas authorized for assistance under the Resource Conservation and Development (RC&D) Program. SCS provides USDA leadership in these areas for locally initiated, sponsored, and directed projects to conserve natural resources, accelerate economic development, and reduce unemployment. RC&D measures completed in 1986 numbered 1,053. RC&D provided financial assistance on 197 of these measures.

**River Basins**
SCS leads USDA cooperation with other Federal, State, and local agencies in making investigations and surveys of river basins to guide the development of water and related land resources in agricultural, rural, and upstream watersheds. During the past year, 69 river basin studies were in progress in 47 States and 12 were completed.

**Flood Plains**
SCS completed 29 flood plain management studies and 15 reimbursable flood insurance studies in 1986. The studies include data on natural benefits and other values provided by flood plains and on management alternatives. Local governments use this information to develop, adopt, implement, and amend flood plain management programs.

**Resource Inventories**
The 1987 National Resources Inventory (NRI), now underway, is the latest in a series of NRI's conducted by SCS to determine the status, condition, and trend of the Nation's soil, water, and related resources. The 1987 NRI will provide information for State and National policy and program formulation, development of the 1990 Farm Bill, allocation of funds, and placement of personnel. It will also be used to fill requests for data from other Federal agencies, State governments, universities, consultants, resource and conservation organizations, and the news media. NRI data will be collected during fiscal year 1987 and released in 1988.

**Important Farmland**
SCS leads USDA efforts in inventorying important agricultural areas. By the end of fiscal year 1986, SCS had published important farmland maps for about 1,170 counties across the Nation. Another 75 maps are nearly complete, and 130 maps are in the early planning stage. These maps show the extent of prime, unique, and other farmlands of local and State importance. Statewide prime farmland maps have been completed for 18 States.

**Cartography and Geographic Information Systems**
The SCS National Cartographic Center reproduced 49,000 conservation plan maps and 1,000 base and thematic maps for land users. A total of 5,200 aerial photo reproductions were provided for soil survey field mapping. Fourteen soil survey areas were contracted for soil map finishing, and 55,000 photo mechanical reproductions were contracted in support of SCS programs. Photobase maps for 113 soil survey

areas were developed for State field mapping and soil map compilation. Of 83 soil survey maps completed, 67 were printed.

**Rural Development**
Through State and local Food and Agriculture Councils, SCS worked to improve program delivery in rural development. This past fiscal year, SCS assisted more than 26,000 units of government in rural communities to control flooding, reduce roadside erosion, improve the landscape, and preserve historical and cultural resources.

**Volunteers**
Close to 1,700 volunteers donated 95,000 hours in 1986 to help SCS with soil and water conservation. Their time, most of it spent in field tasks, is valued at almost two-thirds of a million dollars. SCS is seeking more volunteers.

**Engineering**
This year more than 50 dams built to SCS engineering standards experienced significant emergency spillway flows. A special SCS team inspected nearly half of the sites and will prepare a spillway performance report. The group's initial findings indicate that emergency spillways designed by current SCS criteria perform as anticipated, with spillway erosion kept within acceptable limits.

Many SCS engineers and geologists received specialized training in order to provide better assistance in dealing with the potential for ground water pollution from nonpoint agricultural sources.

**Water Quality**
SCS helped to develop the USDA Nonpoint Source Water Quality Policy released in 1987. Several SCS employees are detailed to work with the Environmental Protection Agency (EPA) in the Great Lakes, Chesapeake Bay, Colorado River, Tennessee Valley Authority 201 Project, and Atlanta area. SCS is also detailing employees to EPA's Boston, Chicago, and Kansas City regions. For fiscal year 1987, SCS will provide at least 3 staff years of technical assistance to EPA's ongoing Clean Lakes projects.

**Rural Clean Water Program**
The Rural Clean Water Program (RCWP) was created in 1980 as an experiment to evaluate the effectiveness of conservation practices in solving nonpoint source water quality problems. To date, 2,357 individuals have signed contracts totaling $31 million in the 20 RCWP projects. When completed, the conservation practices in these contracts will adequately treat 426,952 acres. The contracts have used 87 percent of the available RCWP cost-sharing assistance for treatment on 80 percent of the estimated critical areas.

**Conservation Education**
SCS took part in three national meetings for teachers of science, biology, and social studies. Educational materials and assistance were provided to thousands of teachers, school administrators, curriculum advisors, youth leaders, and concerned citizens and citizen groups.

SCS continued to work with the General Federation of Women's Clubs in the multi-year program, "The World at Your Feet." Since 1984, thousands of club members have been involved in local soil and water conservation activities.

**Snow Surveys**
Through its Snow Telemetry System (SNOTEL), SCS collected snowpack information at 535 automatic data collection sites in the Western United States. SCS issued more than 3,500 water supply forecasts used by municipal water authorities, irrigation companies, and individuals.

**Range and Pasture**
SCS targeted additional funding for increasing the range staff, range training, and special projects in range States. An SCS range conservationist position was established in Tucson, Ariz., to serve as liaison with ARS in a project to improve the technology for predicting rangeland erosion. A pilot project on range site description and correlation is underway in California, Nevada, Utah, and South Dakota to evaluate and refine procedures and formats describing ecosystem components for soil and range site correlation. The first statistical national inventory of brush, including species composition, density, and canopy cover, will be made through the 1987 National Resources Inventory. As part of SCS's long-term goal for improving range technology, plans have been initiated for providing advanced degree opportunities for range conservationists. SCS is working with the Delaware Valley State College in Pennsylvania to analyze the Voisin method of intensive grazing.

**Windbreaks**
SCS assisted with planting an estimated 2,800 miles of field windbreaks in 1986 to protect cropland from wind erosion and provide wildlife habitat. The agency also assisted landowners with planting farmstead and feedlot windbreaks to save energy. With a number of other organizations, SCS cosponsored the first International Symposium on Windbreak Technology in June, 1986.

**Appraisal and Program Development**
SCS has prepared the second appraisal of the soil, water, and related resources of the Nation required by the Soil and Water Resources Conservation Act of 1977. The appraisal is scheduled for release late in 1987. Work was initiated on an update of the National Program for Soil and Water Conservation that is scheduled for completion early in 1988.

**Fish and Wildlife**
SCS continued to provide technical assistance to land users to maintain and improve wildlife and fish habitat on private land. This assistance led to improved wildlife management on more than 1.6 million acres.

**Plant Materials**
SCS plant materials centers (PMC's) cooperatively released 12 conservation plants in 1986, bringing the total to 258. Of these

releases, 181 were produced commercially in 1985. To meet increasing demands for conservation plants, brought about partly by extensive plantings under the new Conservation Reserve Program, the PMC's are increasing production of foundation seed for distribution to commercial growers. In a search for better conservation plants, the PMC's are currently evaluating about 21,000 plants and conducting 2,900 field trials on farms and ranches. To assist the users of conservation plants, a new data base, PMSOURCE, was developed in 1986.

**Forestry**
SCS made suitability determinations for the 585,000 acres of eroding cropland planted to trees under the new Conservation Reserve Program. The agency continues to provide technical assistance to land users to maintain and improve the forest resource on private lands.

**Cultural Resources**
SCS cultural resources activities this past year included the discovery of a 19th century farmstead that is a significant contribution to black history in agriculture and in Arkansas. The training of field office personnel to handle cultural resources received new emphasis as six workshops were held across the Nation. In addition, five of eight planned self-paced training modules on cultural resources were submitted for production as part of the agency's national training program.

**Sociology**
SCS placed major emphasis this past year on applying sociological research findings about the adoption of conservation practices. A technical note for estimating potential participation rates in watershed protection projects was prepared, including a guide based on characteristics of land users, farms and ranches, conservation practices, and local communities. The guide assists conservation planners in estimating levels of participation in a particular area, as well as providing guidance on the best mix of technical assistance, financial assistance, and information for program effectiveness. Other activities include the development of two training modules—"Leadership Identification and Working with Groups" and "Conflict Resolution"—that can be used for self-paced instruction or group instruction and are designed to meet the needs of field office personnel.

**Information Resources Management**
SCS is involved in a major procurement of computer hardware and software for the Field Office Communications and Automation System (FOCAS). A total of 1,192 systems have been ordered, and 777 systems have been installed. Approximately 600 employees have received technical training in the use of the FOCAS hardware and software. Additional contracts for portable microcomputers and terminals are being issued to satisfy the total hardware needs of SCS field offices. The first custom software package is the Computer Assisted Management and Planning System (CAMPS), which has been tested at 24 field locations. CAMPS will be revised and issued to all field offices in 1987.

**Reform '88**
SCS Reform '88 initiatives are producing notable agencywide savings in dollars and time through the use of an automated accounting system; travel agency services and charge cards for travel; a meeting control system; automated contract preparation; new leasing authority and procedures; teleconferencing; teletraining; automated processing of personnel actions; and the sharing of equipment, supplies, and procurement services at State and local offices.

**International Activities**
This past year, 143 specialists traveled to 42 countries to provide assistance requested by the Agency for International Development (AID), international organizations, and individual countries. Personnel assignments included scientific and technical exchanges as well as assignments under the Soil Management Support Services, an AID project to provide technical assistance in soil survey, soil classification, and use and management of soils to developing countries. In return, 435 officials, scientists, and technicians from more than 55 countries received personal consultation and/or observed conservation practices in the United States.

**Economics**
An economic evaluation of the new Conservation Reserve Program is in progress, and a report will be available from the Economics and Social Sciences Division in the near future.

## Summary of SCS Assistance During Fiscal Year 1986

| Progress Item | | Fiscal Year 1986 |
|---|---|---|
| **Long-term Contracts** | | |
| Contracts completed or terminated | | |
| GPCP | No. | 1,081 |
| | acres | 2,295,346 |
| RAMP | No. | 113 |
| | acres | 1,977 |
| Watershed protection and flood prevention | No. | 339 |
| | acres | 44,525 |
| Contracts signed | | |
| GPCP | No. | 946 |
| | acres | 2,673,344 |
| RAMP | No. | 80 |
| | acres | 901 |
| Watershed protection and flood prevention | No. | 1,467 |
| | acres | 181,131 |
| Unserviced applications | | |
| GPCP | No. | 1,587 |
| RAMP | No. | 1,478 |
| Watershed protection and flood prevention | No. | 1,799 |
| | acres | 315,778 |
| **Resource Conservation and Development Areas** | | |
| RC&D measures completed | No. | 1,053 |
| **Conservation Plans and Related Services** | | |
| New district cooperators | No. | 4,070 |
| | acres | 6,489,872 |
| Individuals, groups, and units of government assisted | No. | 972,411 |
| Individuals and groups applying practices | No. | 390,938 |
| Conservation plans | acres | 13,025,273 |
| **Soil Surveys** | | |
| Soil surveys | acres | 45,851,950 |

## It's All in the Family, for SCS Volunteer

One key for a successful conference is to have activities planned for accompanying family members. This helps to make the families feel a part of the organization, frees the conferees to attend to business, and generally makes the conference more pleasant and less disruptive for everyone.

The problem is that most hosts are so tied up with the conference itself that no one is available to arrange anything for the accompanying family members. But some are lucky. They get a volunteer.

When extra hands were needed by the Nevada State office of the Soil Conservation Service last September to host the State Conservationists' National Conference in Clark County, Nev., a very capable pair of hands was offered by Barbara Moreland. Moreland, a professional tour director, arranged field trips and assisted with a breakfast and luncheon for the spouses of the conferees, mostly SCS State conservationists and officials from Washington, D.C.

"We couldn't have managed as well without her," said Charles R. Adams, SCS State Conservationist for Nevada, who later presented Moreland with a Certificate of Appreciation from SCS Chief Wilson Scaling. "The spouses would not have received the assistance they needed, and they wouldn't have had as enjoyable an experience attending the conference."

Moreland's husband is Ronald Moreland, Nevada's assistant State conservationist for operations, and she knows most of the Nevada SCS staff. This helped her know who to contact when assistance was needed.

"The group was so pleasant that it made the entire job very enjoyable," she said.

When Moreland's not doing volunteer work for SCS, she can be found leading tour groups to Lake Tahoe, Nev.; San Diego, Los Angeles, and San Francisco, Calif.

**Elizabeth Warner,**
public affairs specialist, SCS, Reno, Nev.

## Positive Thinking Makes It Work

In April 1986, Rollin Swank, Soil Conservation Service State conservationist in Morgantown, W. Va., challenged State and field office staffs to achieve an active volunteer program by October 1.

Some who doubted that it could be done voiced common excuses: No one will volunteer to help a government agency, and if they do they won't be qualified. It takes too long to train volunteers, and once they're trained they leave or work too few hours to make the investment of time worthwhile. And employees won't recruit volunteers because they're worried that volunteers will be used to replace them.

Other SCS employees throughout the State, however, accepted Swank's challenge and set out to learn how best to recruit, train, and manage volunteers. By October, employees had recruited an additional 31 volunteers, and that number is growing.

The volunteers include secretaries, bookkeepers, educators, journalists, agronomists, foresters, and chemists. Some are SCS retirees and have gone right to work. Others who aren't trained conservationists have skills that are easily adapted to many SCS tasks. Educators are helping with outdoor classrooms, secretaries are typing and filing, and journalists are making soil and water conservation more understandable to the public.

West Virginia has had good experience with the volunteer program. Two SCS volunteers, Helen Allemong and Margarotte McCammon, have been working with SCS for 3 years. One volunteer, Scott Hofer, volunteered for just one month last summer, but he worked 94 hours. Another volunteer, Robert McCroby, a retired SCS engineering technician, put in 225 hours outdoors last January and February in the worst winter weather to help supervise inspection of emergency flood repair work. Three volunteers, June McDonough, Jim Crawford, and James Doll, arranged 12,000 West Virginia watershed and flood documentary slides to be recorded on videotape. A high school student, Daniel Thorn, volunteered 30 hours to make copies and put bid packages together for watershed and abandoned mined land reclamation projects, freeing SCS staff to work on priority tasks requiring more specialized skill.

Swank credits the success of the volunteer program in West Virginia to training of SCS employees. They determine the jobs volunteers can do, write position descriptions for the jobs, and interview volunteers to match their skills and interests to the jobs that need to be done. SCS employees have also received training in managing volunteers and recognizing them for work well done. Recognition, according to Swank, keeps morale and productivity high.

Above all, Swank credits the success of the volunteer program in West Virginia to commitment by SCS employees to make it work.

**Peg Reese,**
State volunteer coordinator, SCS, Morgantown, W. Va.

**Diana Knott,**
SCS Earth Team volunteer, Morgantown, W. Va.

Robert Lough, a retired SCS district conservationist and now an SCS volunteer, works out of the Grafton, W. Va., field office. He does conservation planning and surveying.

Photo by Robert W. Schnably, district conservationist, SCS, Grafton, W. Va.

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## Down to Earth with Anthony Quinn

Internationally renowned actor Anthony Quinn is making his stage presence felt for the Soil Conservation Service in four public service announcements to be nationally televised in 1987.

Quinn, a two-time Academy Award winner, is the narrator and spokesperson for the four SCS Earth Team spots. Acclaimed throughout the world for his lead role in "Zorba the Greek," the actor has starred in 205 films.

Quinn encourages viewers to join Earth Team conservation volunteers by telephoning 1-800-THE-SOIL to find out how they can help SCS conservationists in their communities.

The toll-free telephone number, sponsored by the Soil Conservation Society of America, provides callers with Earth Team information and promotional materials that direct them to SCS Volunteer Program coordinators in their respective States.

The 30-, 20-, 15-, and 10-second spots, written, produced, and filmed by the SCS Public Information Division, and the U.S. Department of Agriculture's (USDA) Office of Governmental and Public Affairs, have been sent to SCS's 50 State offices for distribution to television stations throughout the Nation. ACTION, the Federal Volunteer Agency, contributed to the cost of reproducing the spots.

In the 30-second spot, Quinn urges viewers to "Think about soil." Quinn says, "Soil isn't dirt, believe me. It's the staff of life, and few Nations are as richly blessed with productive soil as our own."

The three shorter spots link the Earth Team and USDA's Take Pride in America campaign that aims to strengthen voluntarism and awareness of the land ethic throughout America.

**Shirley Foster Fields,**
public affairs specialist, SCS, Washington, D.C.

Country Music Star Charley Pride and Evelyn Majure, an SCS volunteer in Hinds County, Miss., in a scene from a public service announcement on the SCS National Volunteer Program.

## Pride in SCS

Country Music Star Charley Pride, a native Mississippian with a conservation plan for his own Delta cropland, believes in the programs of the Soil Conservation Service. And he's using his talent to help spread the word about soil conservation in four public service announcements (PSA's).

SCS Public Affairs Specialists Chuck Jepsen and Becky McNair wrote the PSA's, which cover the conservation of natural resources, the SCS National Volunteer Program, and the value of soils information for homebuilders. To add personal appeal, the spots included excerpts from some of Pride's most popular songs including "Mississippi Cotton-Pickin' Delta Town" and "Crystal Chandelier."

The PSA's are receiving considerable air time on television and radio throughout Mississippi.



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